

CLAIMS

1-21 (cancelled).

22. (new) A method of adjusting the third order input intercept point (IIP3) of a low noise amplifier in a transceiver having a transmitter, a receiver, and a processor, comprising:

detecting at least high and low transmit powers of the transmitter; and
if the transmit power is high, setting the IIP3 to a maximum level.

23. (new) The method of claim 22, further comprising:

computing, in the processor, an error rate of a signal received by the receiver;
if the transmit power is low and the error rate exceeds a predetermined threshold, setting
the IIP3 to a maximum level; and
if the transmit power is low and the error rate does not exceed the predetermined
threshold, setting the IIP3 to a minimum level.

24. (new) The method of claim 23 wherein the error rate is a Frame Erasure Rate (FER).

25. (new) The method of claim 24 wherein the predetermined threshold is one-half percent.

26. (new) A method of operating a transceiver having a transmitter operative to transmit a signal at a variable transmit power including at least a high and a reduced power level, a receiver operative to receive a signal and including a low noise amplifier having an adjustable gain and an adjustable third order input intercept point (IIP3), and a processor operative to compute an error rate in the signal received by the receiver, comprising:

detecting a signal strength of the received signal; and

if the transmitter is transmitting at or above the high power level and the received signal strength is below a signal strength threshold, operating the low noise amplifier at maximum gain and maximum IIP3.

27. (new) The method of claim 26, further comprising:
detecting an error rate in the received signal, and
if the transmitter is transmitting at or below the reduced power level and the received signal strength is below the signal strength threshold and the error rate is below an error rate threshold, operating the low noise amplifier at maximum gain and minimum IIP3.
28. (new) The method of claim 27, further comprising:
if the transmitter is transmitting at or below the reduced power level and the received signal strength is above the signal strength threshold and the error rate is below the error rate threshold, operating the low noise amplifier at minimum gain and minimum IIP3.
29. (new) The method of claim 27, further comprising:
if the transmitter is transmitting at or below the reduced power level and the received signal strength is above the signal strength threshold and the error rate is above the error rate threshold, operating the low noise amplifier at maximum gain and maximum IIP3.
30. (new) A transceiver, comprising:
a transmitter operative to transmit a signal at a variable transmit power including at least a high and a low power level;

a receiver operative to receive a signal and determine its signal strength, and including a low noise amplifier (LNA) having an adjustable gain and an adjustable third order input intercept point (IIP3); and

a processor operative to compute an error rate in the signal received by the receiver, and to adjust the IIP3 of the LNA in response to the transmitter's transmit power.

31. (new) The transceiver of claim 30 wherein if the transmit power is high and the receiver signal strength is below a signal strength threshold, the processor adjusts the IIP3 of the LNA to a maximum value.

32. (new) The transceiver of claim 31 wherein if the transmit power is high and the receiver signal strength is below a signal strength threshold, the processor additionally adjusts the gain of the LNA to a maximum value.

33. (new) The transceiver of claim 30 wherein if the transmit power is low and the receiver signal strength is below the signal strength threshold and the error rate is below an error threshold, the processor adjusts the IIP3 of the LNA to a minimum value.

34. (new) The transceiver of claim 33 wherein if the transmit power is low and the receiver signal strength is below a signal strength threshold and the error rate is below the error threshold, the processor additionally adjusts the gain of the LNA to a maximum value.

35. (new) The transceiver of claim 30 wherein if the transmit power is low and the receiver signal strength is above the signal strength threshold and the error rate is below an error threshold, the processor adjusts the IIP3 of the LNA to a minimum value.

36. (new) The transceiver of claim 35 wherein if the transmit power is low and the receiver signal strength is above a signal strength threshold and the error rate is below the error threshold, the processor additionally adjusts the gain of the LNA to a minimum value.

37. (new) The transceiver of claim 30 wherein if the transmit power is low and the receiver signal strength is above the signal strength threshold and the error rate is above an error threshold, the processor adjusts the IIP3 of the LNA to a maximum value.

38. (new) The transceiver of claim 37 wherein if the transmit power is low and the receiver signal strength is above a signal strength threshold and the error rate is above the error threshold, the processor additionally adjusts the gain of the LNA to a minimum value.